

IN THE CLAIMS:

1 1-28. (Cancelled)

1 29. (Currently Amended) A powder compression molding and assembly system
2 comprising:

3 a rotary disk;

4 a plurality of molding units mounted on the rotary disk at spaced circumferential
5 locations, each of said plurality of molding units including a cylindrical die, die;

6 a lower ~~plunger concentric with said cylindrical die~~, plunger;

7 an upper ~~plunger~~, and plunger;

8 a center pin concentric with said lower plunger for defining an annular space
9 within said die for molding powder into tubular configurations, as when one of the plurality of
10 the molding units are moved along a circular path to be aligned between the lower plunger and
11 the upper plunger;

12 a pair of pressure rollers provided at least at two equally spaced locations on the
13 movement path of the plurality of molding units for pressure engagement with the upper plunger
14 and the lower plunger, respectively, ~~of each of said plurality of molding units~~;

15 a feed station for loading each cylindrical die with a powder material to be
16 molded by pressure engagement with the upper plunger and lower plunger into a pellet;

17 a plurality of operating units provided respectively to each of the plurality of
18 molding units and moved along a concentric path with the molding units, for transferring and
19 retractably positioning a case above and in alignment with the cylindrical die of each of the
20 molding units; and

21 an- a plurality of insertion assembly ~~station~~ stations mounted at an appropriate
22 position on a movement path of the molding units for inserting ~~the~~ molded pellet pellets into a
23 case operatively positioned outside of and in alignment with the cylindrical die by an operating
24 unit;

25 a case carrying-in unit for feeding a case to a first insertion assembly station;
26 a case holding unit for holding and conveying a case loaded with a first molded
27 pellet at the first insertion assembly station to a second insertion assembly station wherein the
28 second insertion assembly station inserts a second molded pellet adjacent the first molded pellet;
29 and

30 a case carrying-out unit for removing a case loaded with the first and second
31 molded pellets, thereby allowing the assembly system to automatically fill a case with a plurality
32 of molded pellets.

1 30. (Previously Presented) The powder compression molding and assembly system
2 according to Claim 29, further comprising a first cam provided immediately downstream of the
3 pair of pressure rollers in a direction of rotation of the rotary disk, for lifting up the center pin
4 and the lower plunger of the molding unit.

1 31. (Currently Amended) The powder compression molding and assembly system
2 according to Claim 30 further comprising a stationary second cam provided in coaxial
3 arrangement with the rotary disk, wherein each of said plurality of ~~leading~~ operating units
4 includes a cam follower for engagement with said second cam.

1 32. (Currently Amended) The powder compression molding and assembly system
2 according to Claim 31, wherein said stationary second cam comprises a first cam surface for

3 causing the loading units to track the concentric path with the molding units, and a second cam
4 surface for causing the loading operating units to advance towards between the upper plunger
5 and the lower plunger of the molding units.

1 33. (Currently Amended) The powder compression molding and assembly system
2 according to Claim 32, wherein each of the operating units comprises an operating lever
3 operatively connected to said cam follower, a support arm connected to said operating lever and
4 rotatably supported on the rotary disk, a case holding means member mounted on said support
5 arm, and a convey jig detachably supported on the case holding means member, said convey jig
6 supporting the cylindrical container such that an open end of the case faces downwards.

1 34. (Previously Presented) The powder compression molding and assembly system
2 according to Claim 33, further comprising a support plate for closing and opening the open end
3 of the case to prevent the pellet from falling out of the case.

1 35. (Previously Presented) The powder compression molding and assembly system
2 according to Claim 29, wherein said pair of pressure rollers are provided at a plurality of
3 locations corresponding to a number of the tubular configurations to be inserted into one case.

1 36. (Currently Amended) The powder compression molding and assembly system
2 according to Claim 35, wherein the case carrying-in unit further comprising a means for
3 supplying a plurality of cases one after another to each of the operating units, said means for
4 supplying the cases being provided downstream of one of said pressure rollers in a direction of
5 rotation of the rotary disk.

1 37. (Currently Amended) The powder compression molding and assembly system
2 according to Claim 36, wherein the cases are supplied to the operating units ~~as being~~ held with
3 respective convey jigs.

1 38. (Currently Amended) The powder compression molding and assembly system
2 according to Claim 36, wherein the case carrying-out unit further comprising a means for
3 receiving the cases one after another from each of the case holding means unit after a
4 predetermined number of ~~tubular configurations~~ pellets have been inserted into the cases, said
5 means for receiving the cases being provided downstream of one of said pressure rollers in a
6 direction of rotation of the rotary disk.

1 39-46. (Cancelled)

1 47. (Currently Amended) A powder compression molding and assembly system
2 according to claim 29, wherein [[a]] the plurality of the insertion assembly stations are provided
3 so that the pellets formed at each of the molding units located between the insertion assembly
4 stations are inserted into the case immediately after the compression molding at the next
5 insertion assembly station. stations.

1 48. (Cancelled)

1 49. (Currently Amended) A powder compression molding and assembly system
2 according to claim 48, 29, wherein each of the case holding means units is mounted on the rotary
3 disk corresponding to each molding unit and is constructed to hold and retract ~~the~~ a case loaded
4 with the first molded pellet at the first insertion assembly station to its retracted position beside

5 the molding unit, and to advance the case to adjacent the movement path of the molding units at
6 to the next insertion assembly station.

1 50. (Currently Amended) A powder compression molding and assembly system
2 according to claim 48- 29, wherein the case is held by a conveyor member, which is conveyed
3 and positioned by the actions of the case carrying-in-means unit, the case holding means unit,
4 and the case carrying-out means unit.

1 51. (Currently Amended) A powder compression and molding and assembly system
2 according to claim 48- 29, wherein the case holding means unit is mounted to one end of an
3 operating lever which is mounted on the rotary disk corresponding to each molding unit, the
4 operating lever being rotatably connected to the rotary disk with a cam follower at the other end
5 thereof engaged with a cam disposed coaxially with the rotary disk, the cam having a retraction
6 cam surface for holding the case holding means unit at its retracted position beside the molding
7 unit and an operating cam surface for causing the case holding means unit to advance to and
8 retract from the movement path of the molding unit.

1 52. (Previously Presented) The powder compression molding and assembly system
2 of Claim 29 wherein the center pin extends into the dry cell housing container during the ejection
3 of each molded tubular electrode pellet.

1 53. (Currently Amended) The power powder compression molding and assembly
2 system of Claim 52 further comprising a first cam provided immediately downstream of the pair
3 of pressure rollers in a direction of rotation of the rotary disk, for lifting up the center pin and the
4 lower plunger of the molding unit.

1 54. (Currently Amended) The powder powder compression molding and assembly
2 system of Claim 53 further comprising a stationary second cam provided in coaxial arrangement
3 with the rotary disk, wherein each of said plurality of operating units includes a cam follower for
4 engagement with said second cam.

1 55. (Currently Amended) The powder powder compression molding and assembly
2 system of Claim 54:

3 wherein said stationary second cam comprises a first cam surface for causing the
4 operating units to track the concentric path with the molding units, and a second cam surface for
5 causing the loading operating units to advance towards and between the upper plunger and the
6 lower plunger of the molding units.

1 56. (Currently Amended) A powder compression molding and assembly system
2 comprising:

3 a rotary disk;

4 a plurality of molding units mounted on the rotary disk at spaced circumferential
5 locations, each of said plurality of molding units including a cylindrical die,

6 a lower ~~plunger concentric with said cylindrical die~~, plunger;

7 an upper ~~plunger, and plunger~~;

8 a center pin concentric with said lower plunger for defining an annular space
9 within said die for molding powder into tubular configurations, as when one of the plurality of
10 the molding units ~~are~~ is moved along a circular path to be aligned between the lower plunger and
11 the upper plunger;

12 a pair of pressure rollers provided at least at two equally spaced locations on the
13 movement path of the plurality of molding units for pressure engagement with the upper plunger
14 and the lower plunger, respectively, ~~of each of said plurality of molding units~~;

15 a feed station for loading each ~~cylindrical~~ die with a powder material to be
16 molded by pressure engagement with the upper plunger and lower plunger into a pellet;

17 a plurality of operating units provided respectively to each of the plurality of
18 molding units and moved along a concentric path with the molding units, for transferring and
19 retractably positioning a case above and in alignment with the die of each of the molding units;

20 ~~and~~

21 an- a plurality of insertion assembly station stations mounted at an- appropriate
22 position positions on a movement path of the molding units for inserting ~~the~~ molded pellet
23 pellets into a case operatively positioned outside of and in alignment with the die by an operating
24 unit, the respective molded ~~pellet is~~ pellets are inserted into the case by movement of the lower
25 plunger plungers while the center ~~pin supports~~ pins support the respective molded pellet;

26 a case carrying-in unit for feeding the cases into a first insertion assembly station;

27 a case holding unit for holding and conveying the cases loaded with a first pellet
28 to a second insertion assembly station wherein the second insertion assembly station inserts a
29 second molded pellet adjacent the first molded pellet in the case; and

30 a case carrying-out unit for removing a case loaded with the first and second
31 molded pellets thereby allowing the assembly system to automatically fill a case with a plurality
32 of molded pellets.

1 57. (Currently Amended) The powder compression molding and assembly system
2 according to Claim 56, wherein each of the operating units comprises an operating lever
3 operatively connected to said cam follower, a support arm connected to said operating lever and
4 rotatably supported on the rotary disk, ~~a case holding means mounted on said support arm~~, and a
5 convey jig detachably supported on the ~~case holding means~~ support arm, said convey jig
6 supporting the ~~cylindrical container~~ case such that an open end of the case faces downwards.

1 Please add newly drafted Claims 58 and 59.

1 58. (New) A powder compression molding and assembly system comprising:
2 a rotary disk;
3 a plurality of molding units mounted on the rotary disk at spaced circumferential
4 locations, each of said plurality of molding units including a die,
5 a lower plunger concentric with said cylindrical die;
6 an upper plunger;
7 a center pin concentric with said lower plunger for defining an annular space
8 within said die for molding powder into pellets, when one of the plurality of the molding units is
9 moved along the circular path to be aligned between the lower plunger and the upper plunger;
10 a pair of pressure rollers provided at least at two equally spaced locations on the
11 movement path of the plurality of molding units for pressure engagement with the upper plunger
12 and the lower plunger, respectively;
13 a feed station for loading each die with a powder material to be molded by
14 pressure engagement with the upper plunger and lower plunger into a pellet;

15 a plurality of operating units, one operating unit provided respectively to each of
16 the plurality of molding units and moved along a concentric path with the molding units, for
17 transferring and retractably positioning a case member above and in alignment with the die of
18 each of the molding units;

19 wherein each of the operating units comprises an operating lever operatively
20 connected to a cam follower, a support arm connected to said operating lever and rotatably
21 supported on the rotary disk, a case holding means mounted on said support arm, and a convey
22 jig detachably supported on the case holding means, said convey jig supporting the case member
23 such that an open end of the case member faces downwards; and

24 an insertion assembly station mounted at an appropriate position on a movement
25 path of the molding units for inserting the molded pellet into a case member operatively
26 positioned outside of and in alignment with the die by an operating unit.

1 59. (New) A powder compression molding and assembly system comprising:
2 a rotary disk;
3 a plurality of molding units mounted on the rotary disk at spaced circumferential
4 locations and moved along a circular path, each of said plurality of molding units including a
5 cylindrical die;
6 a lower plunger;
7 an upper plunger;
8 a center pin concentric with said lower plunger for defining an annular space
9 within said cylindrical die for molding powder into pellets, when one of the plurality of the

10 molding units is moved along the circular path to be aligned between the lower plunger and the
11 upper plunger;

12 a pair of pressure rollers provided at least at two equally spaced locations on the
13 movement path of the plurality of molding units for pressure engagement with the upper plunger
14 and the lower plunger, respectively;

15 a feed station for loading each cylindrical die with a powder material to be
16 molded by pressure engagement with the upper plunger and lower plunger into a pellet;

17 a plurality of operating units, one operating unit provided respectively to each of
18 the plurality of molding units and moved along a concentric path with the molding units, for
19 transferring and retractably positioning a case member above and in alignment with the
20 cylindrical die of each of the molding units, wherein each of the operating units comprises an
21 operating lever operatively connected to a cam follower, a support arm connected to said
22 operating lever and rotatably supported on the rotary disk, a case holding unit mounted on said
23 support arm, and a convey jig detachably supported on the case holding unit, said convey jig
24 supporting the case member such that an open end of the case member faces downwards; and

25 an insertion assembly station mounted at an appropriate position on a movement
26 path of the molding units for inserting the molded pellet into a case member operatively
27 positioned outside of and in alignment with the cylindrical die by an operating unit, the molded
28 pellet is inserted into the case member by movement of the lower plunger while the center pin
29 supports the molded pellet.